

ABSTRACT

A communication system including an automatic control (AGC) circuit, a receiver, an analog to digital converter (ADC) and an insertion phase variation compensation module. The AGC circuit receives and amplifies communication signals. The gain of the AGC circuit is continuously adjusted. The AGC circuit outputs an amplified signal to the receiver which, in turn, outputs an analog complex signal to the ADC. The ADC outputs a digital complex signal to an insertion phase variation compensation module which counteracts the effects of phase offsets introduced into the communication signal due to the continuous gain adjustments associated with the AGC circuit.